INFORMATION SHEET

ORDER NO. _____
CITY OF BAKERSFIELD
FOR CLOSURE AND POST-CLOSURE MAINTENANCE
CITY OF BAKERSFIELD SANITARY LANDFILL
KERN COUNTY

The City of Bakersfield owns and maintains the City of Bakersfield Sanitary Landfill, located in the northeast part of the City of Bakersfield about three quarters of a mile south of the Kern River. The site was originally established as a burn dump in 1943 and converted to a sanitary landfill in 1956. The site ceased operation in September of 1983. The County of Kern operated the site from 1975 to 1983. The facility consists of one 132-acre unlined waste management unit (Unit) and is currently regulated by Waste Discharge Requirements Order No. 5-00-235. This Order revises the existing Waste Discharge Requirements to provide for the construction of a final cover and to regulate post-closure maintenance of the facility.

The site is near the eastern edge of the San Joaquin Valley near the boundary with the southern Sierra Nevada Mountains. The climate is semi-arid, with hot, dry summers and cool winters. The average annual precipitation is 6.7 inches with an average pan evaporation of 73.4 inches. The site is not within a 100-year floodplain according to FEMA maps.

The closest potential Holocene fault is the Kern Bluff Fault, approximately two miles east of the facility. The fault has offset modern soils by approximately two feet. Two historic earthquakes were recorded on the fault in 1954 and 1985 with Richter magnitude 2.5 and 2.4, respectively.

Land within 1,000 feet of the site is used for residential, non-irrigated open space, and commercial activities including oil production. Residential areas are located immediately south of the facility.

First encountered groundwater is over 600 feet below the native ground surface. Groundwater elevations range from approximately 103 feet to 121 feet AMSL. Only one groundwater monitoring well has been completed on site preventing site-specific calculation of groundwater gradient and flow direction. At least one boring encountered natural gas before reaching any groundwater. The groundwater appears to be unconfined with a regional direction of flow to the south, away from the Kern River. Monitoring data indicates that groundwater has a total dissolved solid range of 262 to 302 mg/l.

Volatile organic compounds (VOCs) that are common constituents of crude oil and other petroleum constituents have been detected in groundwater at the site. Detection of these

compounds is believed to be naturally occurring and not indicative of a release from the Unit. Other volatile organic waste constituents have not been detected in groundwater.

Analysis of soil-pore liquid has detected numerous VOCs. The VOCs detected include chlorobenzene, dichlorobenzene, dichloroethene, ethylbenzene, isopropylbenzene, isopropyltoluene, naphthalene, toluene, trichlorobenzene, trimethylbenzene, xylenes, acetone, carbon disulfide, and methyl ethyl ketone. Many of these VOCs may be associated with naturally occurring petroleum deposits in the area. It appears that soil-pore liquid has been degraded by waste constituents being carried from the Unit by landfill gas.

The Discharger demonstrated that groundwater detection monitoring is not feasible due to the depth to groundwater, the thickness of the vadose zone, the presence of subsurface natural gas hazards, and the lack of evidence for landfill impacts to groundwater. The Discharger also demonstrated that site specific conditions preclude the operation of an effective vadose monitoring system. The landfill gas extraction system and the construction of a final cover system will be the best management practice available for the containment of the waste and the removal of landfill gas entering the vadose zone.

The Discharger adequately demonstrated that construction of a Title 27 prescriptive standard cover would be unreasonable and unnecessarily burdensome when compared to the proposed engineered alternative design. There is no clay source on-site or nearby and the cost of importing clay from off-site or mixing on-site soils with bentonite would cost substantially more than the alternative design. The Discharger demonstrated that an evapo-transpirative cover utilizing soil from a nearby borrow source would be an appropriate engineered alternative to the prescriptive design. This Order requires the Discharger to install a pan lysimeter(s) beneath the final cover for long-term monitoring of the cover integrity.

On 9 October 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations (Title 40, Code of Federal Regulations, Parts 257 and 258, "federal municipal solid waste [MSW] regulations" or "Subtitle D") that apply, in California, to dischargers who own or operate Class II or Class III landfill units at which municipal solid waste is discharged. Section 258.1(c) of Subtitle D states that Subtitle D regulations do not apply to municipal solid waste landfills that do not receive waste after 9 October 1991. The facility ceased discharge in 1983. Therefore, the provisions of Subtitle D do not apply to this Unit.

The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code §21000, et seq., and the CEQA guidelines, in accordance with Title 14, CCR, §15301. Revision of the waste discharge requirements updates the requirements to

conform with the California Water Code and Title 27, California Code of Regulations, §20005 et seq.

REH:reh/rac:8/18/2005